

CLAIMS

1. A permanent magnet member for a voice coil motor, the permanent magnet member comprising:

5 a magnet body including a shorter periphery, a longer periphery located at a position separated from the shorter periphery by a predetermined distance, and a pair of side peripheries connecting the shorter and longer peripheries to each other, the magnet body having a fan-shaped planar form; and

a corrosion-resistant film applied to a surface of the magnet body;

10 wherein the permanent magnet member has a thickness whose maximum and minimum values yield a difference of 10 to 150 μm therebetween.

2. A permanent magnet member for a voice coil motor according to claim 1, wherein the maximum value of the thickness exists along a peripheral part comprising the shorter periphery, longer periphery, and side peripheries; and wherein the minimum value of the thickness exists in an area surrounded by the peripheral part.

3. A permanent magnet member for a voice coil motor according to claim 1, wherein the corrosion-resistant film has a thickness whose maximum value exists along a peripheral part constituted by the shorter periphery, longer periphery, and side peripheries, and whose minimum value exists in an area surrounded by the peripheral part.

4. A permanent magnet member for a voice coil motor according to claim 2 or 3, wherein the corrosion-resistant film has a thickness greater in the peripheral part than in other areas.

5. A permanent magnet member for a voice coil motor according to

claim 4, wherein the magnet body has a substantially uniform thickness or a thickness smaller in the peripheral part than in other areas.

5 6. A permanent magnet member for a voice coil motor according to claim 2, wherein the magnet body has a thickness greater in the peripheral part than in the other areas; and wherein the corrosion-resistant film has a substantially uniform thickness.

7. A permanent magnet member for a voice coil motor according to one of claims 1 to 6, wherein the permanent magnet member for a voice coil motor has a thickness of 5 mm or less;

10 wherein the corrosion-resistant film is constituted by an electroplating film made of Ni or an Ni alloy; and

wherein the corrosion-resistant film has a thickness falling within the range of 5 to 60 μm .

8. A voice coil motor comprising:

15 a pair of yokes disposed so as to oppose each other with a predetermined distance therebetween;

a permanent magnet member disposed between the pair of yokes and bonded to each of the yokes by way of an adhesive layer; and

20 a coil mounted to a rotatable member and disposed in a magnetic space formed by the permanent magnet member and the yoke, the rotatable member being rotatable about a predetermined axis;

wherein a bonding surface of the permanent magnet member to the yoke has a peripheral part projecting by 5 to 75 μm from an area surrounded by the peripheral part.

25 9. A permanent magnet member for a voice coil motor, the permanent magnet member being a planar permanent magnet member

and comprising a magnet body and a corrosion-resistant film formed on a surface of the magnet body, the permanent magnet member having first and second surfaces opposing each other;

5 wherein at least one of the first and second surfaces is formed with a recess; and

wherein a deepest part in the recess and a tangent plane thereof have a distance of 5 to 75 μm therebetween.

10 10. A permanent magnet member for a voice coil motor according to claim 9, wherein the permanent magnet member comprises a shorter periphery, a longer periphery located at a position separated from the shorter periphery by a predetermined distance, and a pair of side peripheries connecting the shorter and longer peripheries to each other, and has a fan-shaped planar form.

15 11. A permanent magnet member for a voice coil motor according to claim 9 or 10, wherein the first and second surfaces have a distance of 5 mm or less therebetween; and wherein the corrosion-resistant film has a thickness of 5 to 60 μm .